

Rockhill Road Bridge
Spanning Brush Creek
48th and Volker Boulevard
Kansas City
Jackson County
Missouri

HAER No. MO-58

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Rocky Mountain Regional Office
Department of the Interior
P.O. Box 25287
Denver, Colorado 80225

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HISTORIC AMERICAN ENGINEERING RECORD
ROCKHILL ROAD BRIDGE

Location: Spanning Brush Creek on Rockhill Road
between 48th Street and Volker Boulevard,
Kansas City, Missouri

Date of Construction,
Alterations: 1901 (Modified in 1930-1931, 1966, 1986.)

Present Owner: City of Kansas City, Missouri

Present Use: Vehicular bridge to be replaced by a new
vehicular bridge. Projected date of
removal is February 1990.

Significance: The Rockhill Road Bridge is the earliest
documented stone bridge of this type in
Missouri. The bridge was built by
William Rockhill Nelson, founder and
owner of the Kansas City Star newspaper,
real estate developer and civic leader in
Kansas City, Missouri. It exemplifies
the city's building process during the
turn of the century's City Beautiful
movement.

Historian and Date: Mary Lucido, US Army Corps of Engineers,
Kansas City District, December 1989

HISTORY

To understand the historical significance of the Rockhill Road Bridge, it is important to understand the development of Kansas City, Missouri at the turn of the century, the City Beautiful movement designed to turn a boom-town into a livable city, and William Rockhill Nelson, newspaper man, entrepreneur, and builder of the bridge.

A. Turn of the Century/The City Beautiful Movement

In the late 19th Century, Kansas City, Missouri became a boom-town that was growing at such a fast pace that it was rapidly turning into a major metropolitan area. From the 1870's to World War I, prominent civic leaders in Kansas City, Missouri, promoted planning designs to transform the appearance of this ugly boom-town into a highly desirable place to live. This planning strategy, which became known as the "City Beautiful" movement, produced a park system, and miles of parkways and boulevards flanked by residential areas. The parks and road system are still in existence today and have contributed to the development of the city.

The effective planning, produced by the City Beautiful movement, reached into every part of the city. It stopped the advancing gridiron street pattern which dissected the suburban landscape and prohibited park development. The parkway and boulevard system followed the natural formation of the land and was graced with trees. This road system provided attractive settings for homes, established recreational opportunities for the people, and, eventually, with the mounting use of automobiles, established road patterns able to handle increased traffic.[1]

During the late 19th and early 20th Century, planners across the United States described this development program as innovative. The city planners of today still maintain the parks, and parkway and boulevard system with the same ideals established during the initial City Beautiful movement.

The primary leaders of the movement were not professional planners but middle-class reformers who saw the city's need for recreation and aesthetics. These planner-reformers included George E. Kessler, landscape architect who gave the impetus to the movement by his designs of the parks and boulevard system; August E. Meyer, president of the first park board; Delbert J. Haff, lawyer who established the legal framework for the implementation of the plan; James Pendegast, the city's most powerful political boss; and William Rockhill Nelson, whose newspaper helped to promote the plan with the public. [2]

B. William Rockhill Nelson

William Rockhill Nelson was a civic leader whose lasting achievements aided the growth of Kansas City, Missouri. As a central figure who exerted strong influence in the city, he used the media to promote city beautification. He also used his experience as a builder to implement the ideals of the movement.

In 1841, Nelson was born in Indiana. He graduated from Notre Dame College and became a lawyer. He traveled to several midwestern communities to practice this profession. When he decided to terminate his law practice, he returned to Indiana to begin a new career as a building contractor. By 1874, he had a thriving wood paving block business and was selling his product to other cities. In 1878, he speculated in his first newspaper enterprise when he became a partner in the Fort Wayne Sentinel newspaper. In 1881, Nelson, alert to the precipitous growth of the Kansas City, Missouri metropolitan area, decided to venture to Kansas City with the specific purpose of establishing a daily newspaper in this booming community.[3]

The Kansas City metropolitan area, at the time of Nelson's arrival, was experiencing a rapid population explosion. Kansas City was a progressive community with the development of electric rail systems, the first in the United States, and new businesses, markets, and trade. The metropolitan area was not under one city charter, but was segmented into several unincorporated, independent small towns which would eventually be annexed into Kansas City, Missouri. Nelson settled in one such community, the Town of Westport, which at that time was at the extreme southern edge of Kansas City, Missouri. He had a large estate and hoped to encourage the growth to this section of the metropolitan area.

Prior to his arrival in the city, he had traveled extensively in Europe and the East and saw beauty in these places which had parks and boulevard systems. He believed the same road systems and parks could be applied to the natural beauty of the Kansas City area.[4] Nelson wanted the rough, unpolished town of the 1880's, in which shanty houses and tenement houses were being constructed to accommodate the population, to match his vision of a progressive, yet stable community. His main passion was to change Kansas City into a beautiful city.

Nelson was the owner of the Kansas City Star newspaper. His influence in the development of the city's parks and boulevard system began when he wrote his first editorial on the park system in 1881. He continued to promote the systems for parks and good roadways for over 20 years. In his zeal, Nelson instructed his newspaper employees to write letters to the Kansas City Star

editor about park proposals to fabricate public concern about specific projects. [5]

Among his major achievements in Kansas City, Nelson founded and edited the Kansas City Star newspaper, influenced and supported the park and boulevard system, designed roadways, built the Rockhill Neighborhood residential district, and provided for the establishment of the Nelson-Atkins Museum of Art built on the site of his own home which he willed torn down after his death. He had a genuine fondness for natural scenes, architecture, and art.

C. Rockhill Road Bridge/Rockhill Neighborhood

The development of the Rockhill district was an expression of William Rockhill Nelson's ideal concept for metropolitan growth. Through his newspaper's publicity of the the Rockhill Road, Bridge, and Neighborhood, he was able to influence the development of roads and residential areas in other parts of the city.

The Rockhill Road and Bridge were built on Nelson's own property in the vicinity of his home "Oak Hall" (now the location of the Nelson-Atkins Museum of Art). Rockhill Road was designed as a parkway lined with trees and followed the natural contours of the land. The width, contour, and plantings conceived in Nelson design of the road remain today as he originally constructed it.

The Rockhill Road Bridge was the earliest documented stone bridge in the state of Missouri. There is no direct information available on whether Nelson personally designed and supervised the construction of the Rockhill Road Bridge or hired someone to design and build the structure. He certainly had the capability and knowledge to construct the bridge, but the architect and engineer of the structure are indeterminable as there are no original plans of the bridge existing today.

The stone bridge over Brush Creek, built at Nelson's own expense, was designed as an example in the fight against the use of "tin bridges". In 1901, the majority of bridges used in the Kansas City and Jackson County, Missouri area were not actually made of tin but iron. These bridges were considered utilitarian but unattractive and not conducive to the City Beautiful movement.[6] The Rockhill Road Bridge was the first and only documented bridge of this type built during the City Beautiful movement. Its design did influence the construction of other aesthetically designed cutstone and concrete bridges during this era. The ornamental concrete Main Street Bridge built in 1911 at 48th

Street and Main Street over Brush Creek is an example of such an aesthetically designed bridge.

The Kansas City Star newspaper, June 23, 1901, ran an article that informed the public that the city had no part in constructing the Rockhill Road and Bridge. The article stated that, "It is now possible to see what Rockhill Road will be like--the eighty-foot boulevard, a mile long crossing Brush Creek over the only stone bridge in Jackson County, for which not one special tax bill has been issued. The entire construction of the Rockhill road--grading, paving, tree planting, sewers and sidewalks and the massive stone bridge is being done at private expense." The article further stated that the land was given voluntarily for the road and bridge.[7]

The September 10, 1901, edition of the Kansas City Star, reported that the bridge was built as "an experiment and an example to the County of the possibilities of what could be done along high creek banks using native stone..." It further reported that the deed to the road and bridge were accepted by the City Council over the veto of the Mayor.[8]

The newspaper articles which discuss the bridge never associate Nelson's name with the structure for he was not totally philanthropic when he built the road and bridge at his own expense and donated them to the city. Other factors influenced this action.

Just prior to construction of Rockhill Road and Bridge, he had been involved in a major controversy with other civic leaders of the City Beautiful movement who had accused him of selfishly designing another roadway to suit his own interests. With the construction and donation of the Rockhill Road and Bridge, he proved that he was not looking out solely after his own interests.[9]

Additionally, and not unreasonably, Nelson was a real estate agent who wanted to develop the area around his own home in keeping with the beautification program. He knew, that with only a dirt road to Brush Creek, people would not move to the area until a good road was built. Rockhill Road, a four-lane thoroughfare, and the Rockhill Road Bridge across Brush Creek were built as a major access route.

About 3 years after completion of the Rockhill Road and Bridge, Nelson began construction of the Rockhill Neighborhood, a historic district listed on the National Register of Historic Places. The houses, within this district, were built between 1904 and 1910 on land acquired by Nelson around 1890. The

trademark for the Rockhill area were the low limestone walls which Nelson placed around each block, the Rockhill Road Bridge and the boundary limitations of his property. Many of these walls still exist today.

The Rockhill Neighborhood consists of portions of Rockhill Road and of dozens of frame/clapboard and limestone rock houses. The limestone rock, quarried near the southern end of his property, was used in the foundations and walls of the houses and in the Rockhill Road Bridge.[10] The random, mortared rubblestone of the dwellings were constructed in a fashion similar to the random patterns of the stone in the bridge. The houses were similar on each block but each block differed from each other. Nelson wanted order to the area but uniform house plans.[11]

Some of the larger homes were constructed for speculation, but the majority of the houses were built for rental properties. During this period of rapid Kansas City growth, many rentals were constructed as substandard dwellings. Nelson built his rental houses as attractive, well-built and affordable single family dwellings. He primarily offered these rentals to his employees. He then surrounded the neighborhood in elm trees, shrubs, and flowers.

In developing this area, Nelson successfully provided an example of beautification to the city through the construction of the Rockhill Road Bridge, stone houses, plantings, roadways, and parks.

DESCRIPTION OF THE ROCKHILL ROAD BRIDGE

The Rockhill Road Bridge is a two span, rubble-limestone stone segmented arch bridge. The rocks used for construction of this structure are uncoursed.

No plans for the construction of the original structure exist today, but early newspaper stories, sketches and photographs of the bridge depict its early appearances. The September 10, 1901, edition of the Kansas City Star, reported that the original bridge dimensions were said to be "fifty feet wide in the clear, with two arches of thirty-five feet each resting on a central pier ten feet thick". [12]

Today, the overall length and width dimensions of the bridge remain the same as when it was originally constructed. The length of the bridge, measured from the pavement construction on each abutment, is 88 feet. Stone walls flank each corner. The bridge has two spans; each 42 feet in length when measured from

the centerline of the central pier to the abutment support. Each arch in the two spans is 14 feet in height. The bridge is 50 feet wide when measured from outside edge to outside edge. The stone cutwater is attached perpendicular to the west side of the central pier. The guardrail extends the full bridge length on each side of the roadway and is 88 feet long. Each guardrail is composed of wood railings set between eight stone posts, which measure 2 feet square by 2 feet, 6 inch tall, for support. Five of the stone posts are spaced 12 feet, 10 inches apart and two are spaced 11 feet, 11 inches apart.

Approximately, 20 feet parallel and west of the bridge is an elevated pedestrian walkway which crosses Brush Creek. This walkway was constructed in 1966 when the sidewalks on the bridge were removed and replaced with road pavement. The pedestrian walkway is a two span concrete bridge with aluminum handrails and stone walls flanking each corner.

Limestone is used in the center arch supports and the exterior facade. The interior of the bridge, as originally constructed, is filled with soil. Attached to each end of the superstructure and substructure are stone abutments. The top railings of the superstructure are comprised of wood railings and stone posts.

Erosion and weathering have taken their toll on the materials used in the construction of the bridge. The structure is in extremely poor condition. A portion of rock has deteriorated and fallen off this bridge. Being exposed to weathering for almost 88 years, the remaining stones have changed color and are in a fragmented state. The surfaces of the individual limestone rocks have been extensively weathered and deteriorated with numerous cracks. The surface cracks have penetrated into the body of the rocks, disintegrating their cores. The stone will crumble when dismantled, as many of the stones are now only held together solely by compression forces. Corrugated metal has been placed under the arches for support. The underside of the arches have been tuckpointed for damage from erosion.

DATES OF CONSTRUCTION, ALTERATIONS, ADDITIONS

The bridge was originally built in 1901. The only portions of the bridge built at the time of William Rockhill Nelson that remain are the stone archways of the substructure and the abutments. Since the construction of the stone arch in 1901, this structure has undergone many repairs which have altered or modified the original bridge. Plans on the 1966 and 1986 repairs are available in the Kansas City, Missouri City Engineer's Office.

Between 1930-1931, the bridge was changed with the lining of the Brush Creek Channel adjacent to the arches' spring lines and the addition of a cutwater on the upstream (west) side. The large, stone cutwater was added to divert ice and large debris away from the central pier to avert damage.

In 1966, this bridge was altered significantly from its original design. Due to flood damage in 1961 and a road improvement program in 1966, a major portion of the structure was rebuilt and redesigned. The original dimensions, stone arches, and the abutments were not altered during this renovation. However, the superstructure was totally altered and the bridge was modernized during this renovation. The original solid stone walls which lined the bridge were not restored to their historical appearance but were reconstructed to new standards. The walls were replaced with individual stone piers connected by wood railings. A new stone top course was added at the bridge deck and the top deck was rebuilt. The bridge was further altered through the modification of sidewalk and abutment wing walls and interim tuckpointing of the stones.

In 1986 a hole developed in the roadway of the Rockhill Road Bridge along the east gutter line where extensive deterioration had previously occurred. To repair the bridge, the engineer's plan specified installation of a new drain on the east side of the bridge and lining the arch. Due to the structure's deteriorated condition, installation of the drains on top of each arch required that a large number of the stones in the vicinity of the drain be replaced with reinforced concrete. The appearance was also changed by the use of corrugated metal placed under the arches of the bridge for added structural support. The corrugated metal was used to line the arch and formed to shape the arch; holes were drilled in the stones to anchor bolts and attach the form to the arch. The spaces between the corrugated metal form and the arch were pumped with concrete grout.

ENGINEERS AND/OR ARCHITECTS

Though the structure has no bridge plate and no original plans of the construction exist, various books and early newspaper articles indicate that the Rockhill Road Bridge was built under the direct supervision of William Rockhill Nelson. It is unknown if anyone other than Nelson participated in the design of the structure.

HISTORICAL SIGNIFICANCE OF THE SITE TO THE STATE OR REGION

The Rockhill Road Bridge is the earliest documented stone bridge of its type in the state of Missouri. It was built in 1901 under the direction of William Rockhill Nelson, a well-known historical figure in Kansas City, Missouri history, as an example of aesthetic application in bridge building during the City Beautiful movement.

ENDNOTES

[1] William H. Wilson, The City Beautiful Movement in Kansas City, (Columbia: University of Missouri Press, 1964), xvii.

[2] Ibid, page xv.

[3] Stephen J. Raiche, "Rockhill Neighborhood", National Register Nomination Form, (Missouri State Park Board Survey and Planning Office, 19 April 1973), 6.

[4] Johnson, Icie. William Rockhill Nelson and the Kansas City Star - Their Relation to the Development of the Beauty and Culture of Kansas City and the Middle West, (Kansas City: Burton Publishing Company), 1935, 87.

[5] Wilson, 1964, 20.

[6] Members of the Staff of the Kansas City Star. William Rockhill Nelson, the Story of a Man, a Newspaper, and a City, (Cambridge, Massachusetts, Riverside Press, 1915), 30.

[7] Kansas City Star, 23 June 1901, 5.

[8] Kansas City Star, 10 September 1901, 4.

[9] Wilson, 1964, 18-19.

[10] Raiche, 1973, 8.

[11] Wilson, 1964, 19.

[12] Kansas City Star, 10 September 1901, 4.

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PERSONAL INTERVIEWS

The people listed below were used as informants for information sources used by Mary Lucido, Historian, for the project. Notes on the information provided by these people are on file in the Planning Division of the US Army Corps of Engineers Office in Kansas City, Missouri.

Melanie Betz	Historic Architect, Landmarks Commission, Kansas City, Missouri.
David Boutrous	Librarian, Western Historical Manuscript Collection, University of Missouri/Kansas City.
Jane Flynn	Historian, Kansas City, Missouri.
Abe Shirazi	Bridge Engineer, Kansas City, Missouri, City Engineer's Office.
Denise Morrison	Archivist, Kansas City Museum.
Gary Toms	Historian, Jackson County Parks and Recreation Office.